

Digital Microwave Corporation

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July 1, 1991

Ms. Donna R. Searcy
Secretary
Federal Communications Commission
1919 M Street, N.W.
Room 222
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Re: RM-7722 - A Petition by
the Harris Corporation to
Channelize the 28 GHz Band

Dear Ms. Searcy:

Attached hereto for filing in the above-cited proceeding are an original and seven(7) copies of the Reply Comments of Digital Microwave Corporation. If there are any questions, please do not hesitate to contact me at (408) 943-0777.

Very truly yours,

DIGITAL MICROWAVE CORPORATION



Randall L. Carl
Senior Product Manager

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**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

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In the Matter of)
)
Amendment of Parts 2, 21 and 94) RM-7722
of the Commission's Rules)
Concerning Channel Assignments)
in the 27.5-29.5 GHz Band)

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

To: The Commission

REPLY COMMENTS OF DIGITAL MICROWAVE CORPORATION

Digital Microwave Corporation ("DMC") hereby submits the Reply Comments below with regard to RM-7722, a Petition for Rulemaking filed with the Commission on April 19, 1991 by Harris Corporation--Farinon Division. The Petition proposes a channelization plan for the 27.5-29.5 GHz band for use in Personal Communications Services as well as other services.

I. PRELIMINARY STATEMENT

1. DMC currently designs, manufactures and markets advanced, high performance digital microwave radio equipment primarily for use in the 2 GHz, 8 GHz, 10 GHz, 13 GHz, 15 GHz, 18 GHz and 23 GHz bands. DMC's products have the capacity to transmit and receive multiple T1 and T2 and single T3 digital lines carrying voice, data and video signals over distances of up to 45 miles. DMC's customers include common carriers seeking to offer a variety of digital transmission services to their

customers, and end users and governmental agencies which are building their own private short-haul telecommunications networks.

2. DMC has noted the Comments filed by Motorola Microwave and Telesciences in response to RM-7722 wherein both point out that several other countries, particularly the U.K., are planning to use the 37.0-39.5 GHz band for PCS Microwave. DMC shares the concerns expressed in those Comments.

**II. DMC CONCURS THAT DESIGNATION
OF 28 GHZ BAND FOR PCS MICROWAVE
WILL HANDICAP U.S. MANUFACTURERS**

3. Both Motorola Microwave and Telesciences emphasize that standardization of PCS microwave in the 38 GHz band would give U.S. manufacturers the advantage of establishing product lines to serve both national and international market entities. With substantial and established customer bases both domestically and in numerous countries around the world, DMC shares the viewpoint of the aforementioned manufacturers.

4. In order to achieve the ultimate goal of building the U.S. economy without penalizing the U.S. consumer, DMC believes that a consistent and standard approach to PCS microwave is essential. The U.K. and other European countries are moving in the direction of using the 37.0-39.5 GHz frequency band for PCS microwave services. In the interest of being internationally competitive, a similar standard in the U.S. would facilitate common products across domestic and international markets and, as

a result, competitive manufacturing costs. The absence of this commonality and associated economies means U.S. manufacturers would be faced with unnecessary development and manufacturing costs stemming from differing technical requirements for the U.S. market. This, in the end, would be a burden carried by the U.S. consumer. DMC believes that, while the opportunity exists, the Commission should meet the PCS microwave requirement in the U.S. with the 38 GHz band, thus improving the competitive position of U.S. manufacturers in the world market and ultimately serving the PCS end-user.

III. 38 GHZ WOULD PROVIDE SUPERIOR FREQUENCY REUSE CAPABILITIES

5. DMC also concurs that the 38 GHz band would facilitate frequency reuse and bandwidth efficiency in a far more positive way than the 28 GHz band. At 38 GHz, as opposed and relative to 28 GHz, microwave paths would be shorter (given equal path reliability) and therefore, PCS systems could be easily engineered for maximum frequency reuse without affecting the reliability of the transmission. This, again, would benefit the consumer as PCS networks could support a larger number of microwave links in a given geographical area and the PCS user would have more cells from which to draw communications service. Therefore, frequency reuse (spectral efficiency) and consumer satisfaction are two critical components of communication that benefit from the use of 38 GHz instead of the 28 GHz band proposed by Harris for the same service.

**IV. EXCEPT FOR THE PCS ASPECTS, DMC HAS
NO OBJECTIONS TO THE HARRIS PETITION** 2 10 13 AM '91

6. DMC has no objections to many of the aspects brought to light in the Harris petition. This includes the general need for frequency band channelization and spectrum efficiency, the desire to "help create new opportunities for expansion of microwave services", the potential of frequency congestion at lower frequencies and the increasing requirements for microwave spectrum driven by growth in cellular communications.

7. DMC, however, for many of the same reasons listed by Harris in support of the 28 GHz band, alternatively supports the 38 GHz band for use with PCS microwave systems. The short-haul nature innate to PCS communications ideally lends itself to use in the 38 GHz band where both the path length and capacity requirements of PCS systems can be met.

V. CONCLUSION

8. In conclusion, DMC for reasons stated herein above, supports strongly the views expressed by both Motorola Microwave and Telesciences with regard to the use of 38 GHz for PCS microwave in the U.S. as opposed to the 28 GHz band proposed by Harris for the same service. DMC believes that a) the minimizing of manufacturing costs for U.S. corporations striving to compete in a global fashion (consistency with PCS standards in other countries), b) the potential for frequency reuse/spectral efficiency, and, c) the ultimate benefit to the U.S. consumer,

all provide solid support for the 37.0-39.5 GHz band being used for PCS microwave in the United States.

DMC, therefore, opposes Harris' Petition for Rulemaking to adopt a channelization plan for the 27.5-29.5 GHz band and urges the Commission to deny it and reserve the 28 GHz band for future spectrum requirements that offer no better alternative.

Respectfully submitted,

DIGITAL MICROWAVE CORPORATION

A handwritten signature in black ink, appearing to read 'RLC', is positioned above the printed name.

Randall L. Carl
Senior Product Manager

Dated: July 1, 1991

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SERVICE LIST

I, Randall L. Carl, certify copies of these Reply Comments
have this date been sent by first class mail to:

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